

SYT7 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP14342a**Specification**

SYT7 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O43581](#)**SYT7 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 9066**Other Names**

Synaptotagmin-7, IPCA-7, Prostate cancer-associated protein 7, Synaptotagmin VII, SytVII, SYT7, PCANAP7

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SYT7 Antibody (N-term) Blocking Peptide - Protein Information**Name** SYT7 ([HGNC:11514](#))**Synonyms** PCANAP7**Function**

Ca(2+) sensor involved in Ca(2+)-dependent exocytosis of secretory and synaptic vesicles through Ca(2+) and phospholipid binding to the C2 domain (By similarity). Ca(2+) induces binding of the C2- domains to phospholipid membranes and to assembled SNARE-complexes; both actions contribute to triggering exocytosis (By similarity). SYT7 binds Ca(2+) with high affinity and slow kinetics compared to other synaptotagmins (By similarity). Involved in Ca(2+)-triggered lysosomal exocytosis, a major component of the plasma membrane repair (PubMed:11342594). Ca(2+)-regulated delivery of lysosomal membranes to the cell surface is also involved in the phagocytic uptake of particles by macrophages (By similarity). Ca(2+)-triggered lysosomal exocytosis also plays a role in bone remodeling by regulating secretory pathways in osteoclasts and osteoblasts (By similarity). In case of infection, involved in participates cell invasion by Trypanosoma cruzi via Ca(2+)- triggered lysosomal exocytosis (PubMed:11342594, PubMed:15811535). Involved in cholesterol transport from lysosome to peroxisome by promoting membrane contacts between

lysosomes and peroxisomes: probably acts by promoting vesicle fusion by binding phosphatidylinositol-4,5- biphosphate on peroxisomal membranes (By similarity). Acts as a key mediator of synaptic facilitation, a process also named short-term synaptic potentiation: synaptic facilitation takes place at synapses with a low initial release probability and is caused by influx of Ca^{2+} into the axon terminal after spike generation, increasing the release probability of neurotransmitters (By similarity). Probably mediates synaptic facilitation by directly increasing the probability of release (By similarity). May also contribute to synaptic facilitation by regulating synaptic vesicle replenishment, a process required to ensure that synaptic vesicles are ready for the arrival of the next action potential: SYT7 is required for synaptic vesicle replenishment by acting as a sensor for Ca^{2+} and by forming a complex with calmodulin (By similarity). Also acts as a regulator of Ca^{2+} - dependent insulin and glucagon secretion in beta-cells (By similarity). Triggers exocytosis by promoting fusion pore opening and fusion pore expansion in chromaffin cells (By similarity). Also regulates the secretion of some non-synaptic secretory granules of specialized cells (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q62747}; Single-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Lysosome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, phagosome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Peroxisome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:Q62747}; Single-pass membrane protein. Note=Localization to lysosomes is dependent on N- terminal palmitoylation and interaction with CD63 {ECO:0000250|UniProtKB:Q9R0N7}

Tissue Location

Expressed in a variety of adult and fetal tissues.

SYT7 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

SYT7 Antibody (N-term) Blocking Peptide - Images

SYT7 Antibody (N-term) Blocking Peptide - Background

Synaptotagmins, such as SYT7, are brain-specific calcium-dependent phospholipid-binding proteins that play a role in synaptic exocytosis and neurotransmitter release. See MIM600782.

SYT7 Antibody (N-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care (2010) In press :Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)Fukuda, M., et al. Biochem. J. 365 (PT 1), 173-180 (2002) :Caler, E.V., et al. J. Exp. Med. 193(9):1097-1104(2001)Mizutani, A., et al. J. Biol. Chem. 275(13):9823-9831(2000)